HAMPRO 500 Process Plunger Pump

HAMMELMANN®

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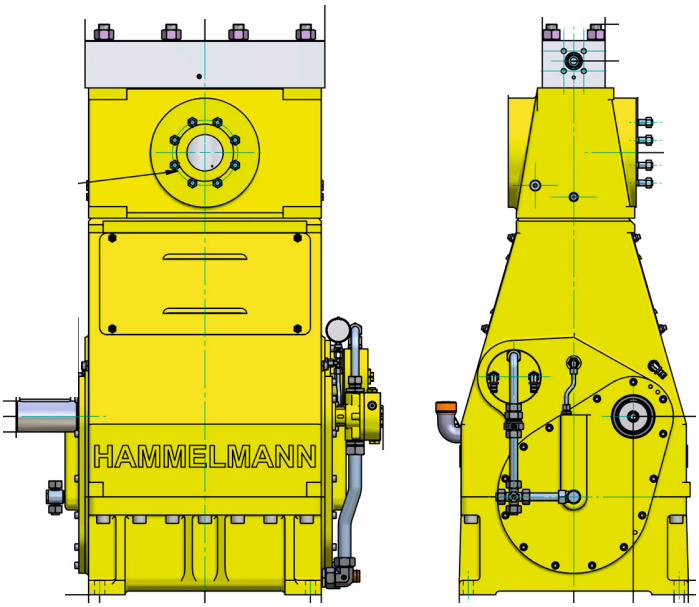
Design criteria

Hammelmann process pumps are built to operate at the continuous maximum duty stated in the performance parameters. Just compare the crankshaft speed, average plunger speed, plunger diameter and power rating.

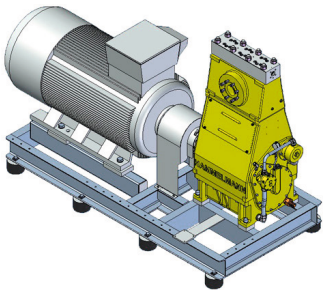
Process Plunger Pump

Weight: approx. 4321 lbs



Stationary unit with electric motor

Length:	114 inch
Width:	52 inch
Height:	75 inch
Weight:	approx. 12,345 lbs at 750 HP



Main dimensions without accessories such as suction line, pressure regulator etc. All shown as right side drive. Detailed dimensional drawings and weights available on request.

Features

- Power ratings up to 750 HP
- Vertical 3 cylinder design

Zero Emission

ZERO EMISSION ®
VDI 2440

TA-Luft (Clean Air) certified to VDI 2440

In the Zero Emission design the pumped fluid is hermetically sealed within the pump preventing leakage to atmosphere during operation.

The bellow system is gastight.

Quality and reliability

- Crank section calculation by ‘Finite element method’ ensures long working life under continuous load
- Stainless steel pump head free of alternating stress
- Integral speed reduction gear
- Pressurised oil lubrication system with oil cooler/filter
- Bellows form hermetic seal between the suction chamber and crank section
- Large selection of materials available for different fluids

Technical data, series HAMPRO 500

Performance parameter (Standard design)

HAM PRO	Q** [GPM]	Required power rating [HP]			D [mm]	r.p.m.	
		400	550	750			
		Operating pressure [psig]				n1	n2
504	13.7	43512			28	1500	315
	13.7	37710	43512			1127/1362	*350
	20.3	30458	39886			1800	465
	18.0	32634			32	1500	315
	18.5	29008	37710			1127/1362	*350
	26.4	22191	29733	36985		1800	465
	21.9	26832			35	1500	315
	22.7	23932	31184			1127/1362	*350
	32.2	18130	24657	31909		1800	465
503	30	20741			40	1500	315
	31	18130	23932			1127/1362	*350
	44	14214	18855	23642		1800	465
	38	16390			45	1500	315
	40	14504	18855			1127/1362	*350
	56	11168	14939	18710		1800	465
502	47	13344			50	1500	315
	50	11603	15229			1127/1362	*350
	69	8992	12038	15084		1800	465
	57	11023			55	1500	315
	61	9428	12764			1127/1362	*350
	83	7542	10008	12473		1800	465
	68	9283			60	1500	315
	73	8122	10733			1127/1362	*350
	100	6237	8412	10443		1800	465
	81	7832			65	1500	315
	87	6962	9138			1127/1362	*350
	118	5366	7107	8992		1800	465
	94	6817			70	1500	315
	101	6092	7832			1127/1362	*350
	137	4641	6092	7687		1800	465
	108	5947			75	1500	315
	116	5221	6817			1127/1362	*350
	157	4061	5366	6672		1800	465
	119	5221			80	1500	315
	133	4641	5947			1127/1362	*350
	173	3481	4641	5947		1800	465
501 high flow	119	5221			80	1500	315
	133	4641	5947			1127/1362	*350
	173	3481	4641	5947		1800	465
	134	4641			85	1500	315
	151	4061	5221			1127/1362	*350
	196	3191	4206	5221		1800	465
	152	4061			90	1500	315
	170	3626	4786			1127/1362	*350
	222	2756	3771	4641		1800	465
	187	3336			100	1500	315
	210	2901	3771			1127/1362	*350
	274	2176	3046	3771		1800	465
	231	2756			110	1500	315
	255	2466	3191			1127/1362	*350
	338	1886	2466	3046		1800	465

Data

- Rod force: 47,209 lbf
- Stroke: 3.9 inch
- Mean piston speed at n2
  315 r.p.m. = 3.5 ft/sec
  350 r.p.m. = 3.8 ft/sec
  465 r.p.m. = 5.0 ft/sec

Standards

- Machine directive 2006/42/EG
- ATEX 94/9/EG
- API 674 (with deviations)
- TA-Luft
- NORSOK M501
- NORSOK M650
- NACE MR0175

Certificates

- DIN EN ISO 9001
- DIN EN ISO 14001
- DIN EN ISO 50001
- BS OHSAS 18001
- ASME-U
- Achilles
- EAC

ENERGY EFFICIENT

Hammelmann plunger pumps convert 93 to 98 % of the shaft power to hydraulic energy.

** Data refer to the medium water (compressibility considered)

* Speed limit for continuous service according to API 674 – 6.3.1

D = Piston/Plunger diameter
n1 = Motor/Engine r.p.m.
n2 = Crankshaft

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